

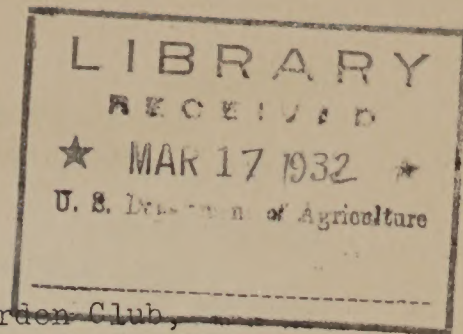
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MEETING - PROGRESSIVE GARDEN CLUB



A radio discussion by members of the Progressive Garden Club, W. R. Beattie, Bureau of Plant Industry, presiding, delivered through WRC and 45 other radio stations, associated with the National Broadcasting Company, Tuesday, February 23, 1932.

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ANNOUNCER:

Another month has passed and the members of the Progressive Garden Club have again assembled for their regular monthly discussion of gardening problems. Today, they are considering their flower gardens, and the securing of seeds and plants with which to beautify their home surroundings. Just a moment and we will join them.

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MRS BROWN:

Well Betty, I stopped at the post office and here's the package of flower seeds that we ordered last week.

BETTY BROWN:

Oh Mother! Let's open it now. I hope they sent everything.

MRS. BROWN:

All right Betty, you open it.

BETTY BROWN:

Daddy, loan me your knife. I can't open this package.

FARMER BROWN:

Here Betty, let me open it for you. (Sound of opening paper-covered package.) - - - - There you are.

BETTY BROWN:

Mother! Just look at the cute little seed packets. (Noise of handling seed packets.)

CHAIRMAN:

Excuse me Mrs. Brown, but if you and Betty don't mind, I think we would all like to have a look at your collection of flower seeds.

MRS. BROWN:

Certainly - - - - that's why I brought them. Thought you might want to look them over.

(Over)



CHAIRMAN:

All right folks, suppose you all pull right up close around the big table. (Noise of shuffling chairs.)

FARMER BROWN:

Yes, let's get our meeting going. I want to get back home just as soon as I can. I'm working on my hotbed and coldframe today. You see, I want to get some seeds planted for early plants.

CHAIRMAN:

Now folks, the subject for discussion today is "Our 1932 Flower Gardens." Mrs. Brown and Betty have sort of beat us to it by ordering their flower seeds and having them here for our inspection today. Well, let's see what you have in your collection, Mrs. Brown?

MRS. BROWN:

Well, here's sweet peas in this package.

CHAIRMAN:

Sweet peas, that's good, and it is about time for planting them in many sections. Mr. Brown, you and Mrs. Brown seem to have such good luck with sweet peas - - - tell us how you grow them.

FARMER BROWN:

I don't believe it's luck, Mr. Chairman. It's mainly hard work and years of experience. You see, before we plant our sweet peas, I spade the ground good and deep, and work a little old composted manure into it. I also sprinkle a large handful of bone meal to every ten feet of row. If I can get around to it, I prepare the ground in the fall so it will settle before time for planting the seed.

AUNT POLLY:

How deep do you cover the seed, Mr. Brown?

FARMER BROWN:

Why Aunt Polly, that depends partly on the condition of the soil. If the ground is a trifle wet or is heavy, I don't cover them more than an inch or two, but if the soil is light or a little dry, I cover them three or perhaps four inches.

CHAIRMAN:

The best sweet peas I've ever seen were grown by an old gardener on a rather heavy clay loam soil. He had manured the land the year before, then he applied a little commercial fertilizer before planting the sweet peas. Honestly, those sweet peas were the talk of the neighborhood, and they produced literally millions of blossoms.

AUNT POLLY:

That sounds like Iowa. The soil and climate there both seem to suit sweet peas.

CHAIRMAN:

Yes, Aunt Polly, sweet peas require a good, strong soil such as would grow good wheat or corn. They should be planted early so they'll bloom before hot weather.



MRS. BROWN:

Does it help to keep the sweet peas blooming if you pick the blooms closely?

CHAIRMAN:

Yes, Mrs. Brown, the more you pick the flowers the more flowers you will have to pick. They're like pansies in that respect.

BETTY BROWN:

Pansies are my favorite flower. Daddy and I planted my pansies last fall, and they have been blooming all winter. I suppose because it's been so warm.

CHAIRMAN:

You get the best pansies in the South by planting them in the fall. You northern gardeners can start the plants in the fall, but it is best to keep them in a coldframe or a sheltered bed over winter.

AUNT POLLY:

What perennials are you planting, Mrs. Brown?

MRS. BROWN:

(Rattling the seed packets) Well, here's Bellflowers, Canterbury Bells, Columbine, Foxglove, Delphiniums, Sweet Williams, Snapdragons, Dianthus-----

CHAIRMAN:

You mean old-fashioned pinks?

MRS. BROWN:

Yes, I like the old-time flowers like our grandmothers grew.

CHAIRMAN:

You have quite a collection here, Mrs. Brown. Now, I suppose that you all know there's quite an art in starting perennials at this time of the year. Our good friend, Mr. F. L. Mulford, is with us today, and by the way, he hasn't been at one of our meetings for a long time, so I'm going to ask him to give us a few pointers on growing perennials. How about it, Mr. Mulford?

MR. MULFORD:

Really folks, I have been so busy lately that I haven't had time to come to the meetings. Now, under most conditions, perennials should be started late in the summer, but there are a few of them like the Delphiniums, Snapdragons, Sweet Williams, and the Dianthus or old-fashioned pinks, that may be started now under glass or indoors and get blossoms the coming summer.

CHAIRMAN:

What kind of soil do you use for sowing the seeds of perennials, Mr. Mulford?

MR. MULFORD:

A very light soil that is well supplied with humus, and I avoid soils that will bake or form a crust. Sand makes a good covering for the seeds, because it does not bake or get hard.



AUNT POLLY:

How deep should the seeds be covered, Mr. Mulford?

MR. MULFORD:

Not too deep, that is, not to exceed four times their diameter. Firm the soil gently about them, then if the soil is the least dry, give it a light watering, but be careful you do not wash the surface. Better use a fine sprinkler for watering the seed bed. I find that it pays to sow the seeds in little rows, because it is easier to distinguish the seedlings from the weeds.

MRS. BROWN:

About how long does it take from the time you sow the seeds of Delphinium and the like, until the plants will be ready to transplant?

MR. MULFORD:

Usually, four to six weeks. Let them stay in the seed bed until they form their first true leaves then transplant them, and give them plenty of space, or you can thin them, and leave the plants in the seed bed until you are ready to set them in your flower borders.

MRS. BROWN:

How long will the seeds of the different perennials keep, Mr. Mulford?

MR. MULFORD:

That varies with the different kinds. The seed of a few of the perennials must be sown as soon as it is ripe, or it will not germinate - - the hardy phlox is a good example. It is best to use fresh seed. Did you ever notice how pansy seed will sprout and grow right where it falls from the mother plant?

CHAIRMAN:

Partial shading of the seed bed will help in getting the seeds started - - - will it not?

MR. MULFORD:

Yes, and a screen of lath, which gives partial shade, is the best form of shading for the seedlings in the coldframe. The shade should be removed entirely during a part of the day.

MRS. BROWN:

How about the perennials like iris and peonies - - - how is the best way to propagate them, Mr. Mulford?

MR. MULFORD:

By division of the roots, in fact, that is the only way to propagate them and have them come true to variety. The ones grown from seed do not come true. Take the iris, for example, it will form seeds, but if you plant the seeds you are liable to get a general mixture of colors or varieties. The same is true of the hardy phlox, the peony, and the chrysanthemum. The columbine, for example, can be propagated either by seeds, or by division of the clumps and will come true to variety.

FARMER BROWN:

When is the best time of the year to divide and re-set the iris and the peony roots?



MR. MULFORD:

The iris should be divided and re-set in the summer right after blooming. Peonies should be divided and re-set late in the summer or early in the fall.

FARMER BROWN:

Do you take any special precautions in propagating the iris or the peony, Mr. Mulford?

MR. MULFORD:

Yes, in the case of the iris, do not plant the divisions of the roots too deeply. They will practically grow on top of the ground, in fact, if you lay them on the ground they will form roots and grow.

MRS. BROWN:

How about peonies?

MR. MULFORD:

Remember this, many cases where peonies fail to bloom are due to planting them too deep. Select pieces of roots having two or three buds for planting. Dig the hole a foot deep and fill it nearly to the top with good soil, but do not cover the peony roots more than two inches.

CHAIRMAN:

Now folks, just a word about growing annual flowering plants. We want the perennials but for immediate effect we will have to rely on the annuals. How about it, Mrs. Brown?

MRS. BROWN:

Well, I sent for a copy of Farmers' Bulletin No. 1171, on Growing Annual Flowering Plants, and when it came Betty and I went through it and selected about twenty-five different annuals that we thought we would like to grow. But that was too many so we cut the list down to about fifteen.

FARMER BROWN:

And you should have heard the arguments they had about cutting down that list.

MRS. BROWN:

Yes, it was hard to decide, but here are the packets of seeds that came in the mail this morning. Cosmos, Coxcomb, Calliopsis, Castor bean, Four O'Clocks, Gillardia, Marigolds, Mignonette, Calendula, Nasturtium, Petunia, Scarlet Runner bean, Salvia and Sweet Alyssum. Quite a list, isn't it?

FARMER BROWN:

I'll say it's quite a list. Where in the world are you going to plant them all, Mary? Remember, I want all of the room in the garden for vegetables.

CHAIRMAN:

Mr. Brown, you make me laugh. With all the acres you have and not wanting to give Mrs. Brown and Betty room to plant their flowers.

(Over)



FARMER BROWN:

That's all right, they can have all the ground they want for flowers. Tell you what I'll do Mary, I'll give you that strip of ground on the other side of the driveway where I had potatoes last year.

BETTY BROWN:

Hurray! But, will you plow it and get the ground ready for us to plant?

FARMER BROWN:

Sure thing, and what's more I'll help you keep the weeds out of your flowers this summer, and I'll run a water pipe across the driveway so that you can get water for watering your flowers.

MRS. BROWN:

Thank you, John. Now, I want to ask Mr. Mulford some more questions. You see, there is a wire fence between that strip of ground and the meadow. What can we plant along that fence to hide it?

MR. MULFORD:

Well, you might cover it with scarlet runner beans, or with Japanese morning glories. Of course, you will want something that will grow quickly. At the back of the strip of ground next the barnlot, you could plant a screen of castor beans and cosmos to form a background.

FARMER BROWN:

Of course, that big oak tree to the west of the house is going to interfere somewhat with your flower garden. My potatoes didn't do much near that tree last season.

MRS. BROWN:

Oh well, we'll have plenty of room for our flowers anyway. I'll tell you, we'll plant a big bed of zinnias at the back of the lot near the tree. Zinnias will grow almost anywhere if they are not shaded too much.

MR. MULFORD:

Clarkia and Vinca will grow even nearer the tree than zinnias.

CHAIRMAN:

Most annual flowering plants want plenty of sunshine, but as Mrs. Brown says, zinnias will grow almost anywhere. I would like to ask Mr. Mulford if he thinks it will pay to start plants of the annuals in a hotbed or indoors and transplant them?

MR. MULFORD:

Yes, where you have a hotbed or coldframe and can spare the space, and the growing season is short, it will pay to start castor beans, zinnias, marigolds, coxcomb, and the annual larkspur in advance of the time the seeds can be sown out-of-doors. In sections where the growing season is long, it may not pay to start the plants indoors. Of course, you can get a more uniform stand of plants if you transplant them.

AUNT POLLY:

I have a steep bank at one side of my place facing the road and the soil is poor. Is there any kind of flower that will grow on it, Mr. Mulford?



MR. MULFORD:

Why, Aunt Polly, I would advise you to plant petunias on that bank. You can either start the plants in a special bed and transplant them to the bank, or you can sow the seed right where you want the plants to grow. Nasturtiums are also good for planting on steep banks.

AUNT POLLY:

Will it pay me to transplant the petunias?

MR. MULFORD:

Yes, you can start the plants earlier and get a more uniform stand on your bank. It's a good idea to put in a little rich soil where you set each plant. Of course, you'll have to sow the nasturtium seed right where it is to grow.

FARMER BROWN:

What are the best kinds of fertilizers for annual flowering plants?

MR. MULFORD:

Well rotted compost is best. If you have enough you can spread it broadcast and work it into the soil, but, if you only have a small amount, you can mix a little with the soil around each plant. Commercial fertilizers are all right, but you have to be a little careful in using them or you may apply too much, besides they don't add any humus to the soil.

MRS. BROWN:

What about watering - - - do flowers want more water than vegetables, Mr. Mulford?

MR. MULFORD:

No, Mrs. Brown, flowers require just about the same moisture conditions as vegetables, but some kinds of flowers will get along with less moisture than others. The main point is to avoid frequent sprinkling, but when you do water your flowers give them a good one, then don't apply any more water until they really need it.

FARMER BROWN:

Well Mary, you and Betty gather up your flower seeds and let's get going. I want to get back home and finish that hotbed before dark.

CHAIRMAN:

I think we will all have to be going, and so ladies and gentlemen the Progressive Garden Club will now stand adjourned until the final Tuesday in March. So long, be seeing you than.

ANNOUNCER:

That brings to a close the meeting of the Progressive Garden Club for today. Those taking part in our program today were Mr. W. R. Beattie, as Chairman, Mr. Frank L. Teuton, as Farmer Brown, Miss Norma L. Hughes, as Mrs. Brown, Miss Patricia Beattie, as Betty Brown, Miss Rose Glaspey, as Aunt Polly, and Mr. F. L. Mulford, as guest speaker.



1. The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is of great importance in the theory of differential equations.

2. In the second part, we consider the case of a linear differential equation. It is shown that the problem can be solved by the method of variation of constants.

3. In the third part, we consider the case of a nonlinear differential equation. It is shown that the problem can be solved by the method of perturbation.

4. In the fourth part, we consider the case of a system of differential equations. It is shown that the problem can be solved by the method of matrix.

5. In the fifth part, we consider the case of a partial differential equation. It is shown that the problem can be solved by the method of separation of variables.

6. In the sixth part, we consider the case of a boundary value problem. It is shown that the problem can be solved by the method of Green's function.

7. In the seventh part, we consider the case of an initial value problem. It is shown that the problem can be solved by the method of Laplace transform.

8. In the eighth part, we consider the case of a problem of stability. It is shown that the problem can be solved by the method of Lyapunov.

9. In the ninth part, we consider the case of a problem of bifurcation. It is shown that the problem can be solved by the method of Poincaré.